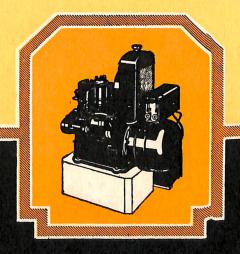
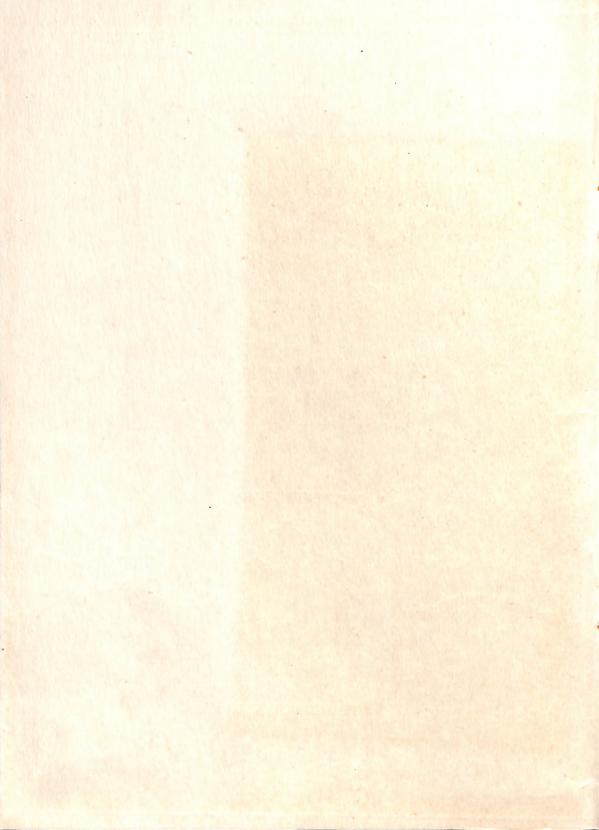
# Press-the-Button Service

from Your Own Electric Plant



KOHLEROFKOHLER

Automatic Electric Plant



# Press-the-Button Service



# From Your Own Electric Plant

### KOHLER OF KOHLER

KOHLER CO., Founded 1873, Kohler, Wis., U. S. A. SHIPPING POINT, SHEBOYGAN, WIS.

Branch Offices and Showrooms where Kohler products can be seen and demonstrated

| 2  |
|--|
| ATLANTA, GA                                      |
| Boston, Mass 445 "C" St.                         |
| CHICAGO, ILL. TRIBUNE TOWER 435 N. Michigan Ave. |
| DETROIT, MICH                                    |
| Houston, Texas                                   |
| Indianapolis, Ind 337 N. Pennsylvania St.        |
| Kansas City, Mo 1113 Wyandotte St.               |
| Los Angeles, Calif 1100 Santa Fe Ave.            |
| MINNEAPOLIS, MINN                                |

| 20 West 46th St.  |
|-------------------|
| 1907 Farnam St.   |
| 1619 N. 32nd St.  |
| .401 Penn. Ave.   |
| 116 W. Grace St.  |
| 526 Arcade Bldg.  |
| 544 2nd St.       |
| 000 Mercer St.    |
| reat Portland St. |
|                   |



Electricity makes work easier, profits bigger and living better



## HOME BENEFITS and BUSINESS PROFITS from ELECTRICITY

ELECTRICITY is the one indispensable modern convenience. It brings bright light for all the hours of darkness. Reading, sewing and work of all kinds can be done by its clear light without eye-strain—and more quickly and better too, for the first requisite to doing work speedily and well is good light.

Electricity supplies heat. It will warm chill, damp rooms with a comforting glow from an electric heater. It operates the toaster, the electric iron, percolator, hot

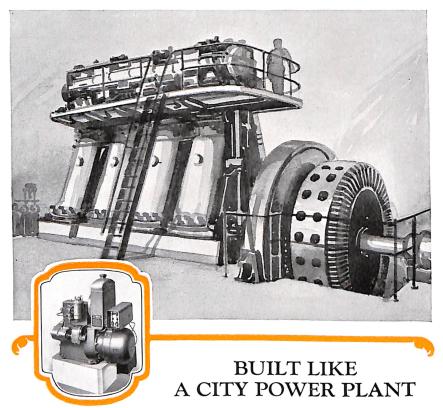
plate and other heat appliances.

Electricity drives motors that make hard work easy and save time and human strength and health. In modern households the weekly washing is done with an electric washer in half the time that slow hand methods require, and with the trifling effort of turning a switch.

Electricity speeds farm chores. It operates machines in garages; pumps and compressors in filling stations; electric fans and coffee grinders in stores; scientific apparatus in schools; and a score of time-saving and cost-

cutting devices wherever an industry exists.

The Kohler Automatic Electric Plant supplies this most useful, tireless, and economical power. And no matter where you are or what you do, it offers you a service that will mean more in profits and more in worth-while living.



THE task which Kohler engineers set themselves to accomplish was to perfect an electric plant which would make "city" electric service available everywhere.

They built the Kohler Automatic Electric Plant along the same principles upon which city power plants are built. Hence, it differs in important respects from other private electric plants with which you may be familiar.

### DEVELOPMENT of THE PRIVATE ELECTRIC PLANT

The first private electric plant consisted of an engine belted to an electric dynamo. With this outfit it was necessary to crank the engine whenever electricity for light or power was needed, and to stop the engine when no more current was required. Obviously, this system had none of the convenience of "city" electric service, which is instantly available whenever an electric light bulb or appliance is turned on.

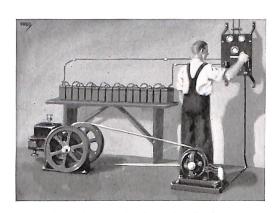
Next came plants which had an engine, generator and storage batteries. It was no longer necessary to start the engine every time electric current was desired, the

batteries carrying a reserve supply.

But, while storing current in batteries meant more convenience in that electric light was available by merely turning a switch, the storage battery brought with it a number of disadvantages. To begin with, it was not efficient, for even a new battery would yield only 80% to 85% of the current sent into it from the generator. As the batteries became old, the amount of current lost, and hence the waste in fuel consumed by the engine, frequently ran as high as 50%.

Moreover, the amount of current available from the batteries was limited by their capacity and the amount of the charge remaining in them. The batteries required considerable care and attention. They were easily damaged by overcharge, over-discharge, short circuits and sudden demands for large amounts of current, and, in the discharged state, were liable to be ruined by freez-

ing. Lastly, even with the best of care, they wore out periodically, and the expense of buying new sets was high.



An early type of private electric plant

## WHY the KOHLER AUTOMATIC REPRESENTS A REVOLUTIONARY IMPROVEMENT

To build a plant which would supply 110 volt "city" electricity, in the "city" way—automatically by merely turning it on and off, without using large storage batteries—that is the task which Kohler engineers accomplished.

A remarkable starting switch, patented and used only on the Kohler Automatic, and a small starting battery made large storage batteries unnecessary. The Kohler Automatic sends its current from the generator direct to the appliance to be operated, just as the city power plant does.

By eliminating storage batteries practically all loss of current between the generator and the electrical devices is overcome, and the expense of buying costly new sets

periodically is avoided.

The Kohler Automatic generates "city" current—110 volts and thus makes it possible for you to use the standard electric appliances carried in stock by your electrical dealer, and lighter, less expensive wire,—special low voltage equipment and heavy, expensive wire are not required.

In convenience, too, it equals city electric service. When you turn on an electric light bulb or appliance, the Kohler Automatic starts automatically to supply as much or as little current as you need. It stops automatically when the last lamp or appliance is turned off.

The Kohler Automaticis, in short, a plant based on a new and better principle, embodying the same method of operation which makes city electric plants efficient, built according to the most advanced principles of gas engine and electric generator design, a plant that represents the highest accomplishment in the field of private electric plant manufacture.

Today the Kohler Automatic Electric Plantis in operation on thousands of farms and ranches, in summer homes and resorts, in country stores, garages, and filling stations; aboard ships sailing the Great Lakes and the Oceans; in country schools and churches; in hospitals and sanitariums; and on dredges, excavators, ditchers, pavers, and other construction and excavating machinery, and in hundreds of other places where electricity can be used to advantage.



### AT the TOUCH of a BUTTON

THE operation of the Kohler Automatic Electric Plant is *entirely automatic*. Press a button or turn on a switch anywhere on your place, and it immediately supplies as much or as little electric current as you need. It stops automatically when all lights and appliances have been turned off.

It is ideal for the operation of automatic equipment. Where water systems are installed on its circuit, it automatically keeps the pressure at the desired point so that water can be drawn from any faucet at any time as long as it is needed—just as if it were supplied by the city water mains. Electric refrigerators, pumps, compressors, thermostatically controlled devices and machinery can also be operated automatically where a KOHLER AUTOMATIC is installed.

### The KOHLER-PATENTED AUTOMATIC SWITCH

To see the Kohler Automatic start, run, and stop itself automatically has been a source of amazement to many people. And yet the automatic switch which makes this possible is merely a series of simple relay switches which operate in succession to crank the plant, to send the current into the appliances when the engine starts, and to "ground" the ignition and thus stop the plant when all appliances are turned off.



Kohler electricity makes the hardest household work easy

## The IMPORTANCE of STANDARD VOLTAGE

THE fact that 110 volt current is used almost universally in city homes and buildings is in itself a conclusive indication that current of this voltage, which all Kohler Plants generate, offers distinct advantages to every user of electric current.

Among these advantages are the following:

110 volt current can be sent four times as far over the same size of wire as 32 volt current, for instance, because it has a higher electrical pressure.



cost of wiring, particularly where electricity must be sent a considerable distance from the plant, because it does not require the heavy, expensive wire needed by current from low voltage plants.

standard electric devices, for sale at any electric store at a lower cost than low voltage, non-standard equipment.

### OTHER FEATURES

All Kohler Electric Plants have smooth-running, balanced engines. The 800 watt plants have two cylinder motors with accurately counter-balanced crankshafts to insure an even flow of power and quiet operation. The 1500 watt and 2000 watt units have four cylinder

engines that are practically vibrationless.

Eliminating vibration means longer life, for to be rid of vibration is to dispose of one of the most destructive factors in the operation of any machine. It also insures that the Kohler Automatic will operate without offensive noise in homes, hospitals, schools and churches where it is important that the plant operate quietly.

### AUTOMATIC FUEL REGULATOR

To insure economy in the use of fuel, the amount of fuel used is regulated by the governor. When only a small amount of current is needed the amount of fuel used is small. As the demand for electricity is increased, more fuel is admitted into the engine to carry the increasing load.

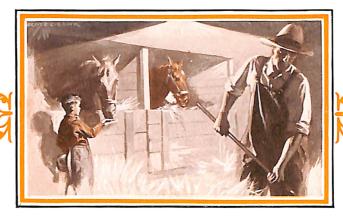
### A SIZE for YOUR NEEDS

Kohler Electric Plants are built in 800, 1500, and 2000 watt capacities. Where more than 1500 watts or 2000 watts of current are needed, two, three or four of these units are connected through a multiple switch. They start operating successively and in tandem as the load becomes larger than one plant alone can supply. They stop in succession too, as the load decreases to within the capacity of three, two or a single plant.

Standard Kohler Plants operate on gasoline. Where natural or artificial gas are to be used for fuel, these plants are equipped with a diaphragm valve which turns the gas on and off automatically as the plant starts,

operates and stops.

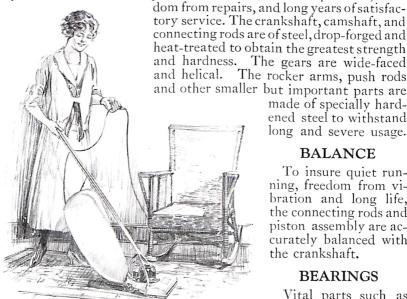
Models without the automatic switch and starting battery, to be started by hand cranking and stopped by pressing a switch, are furnished whenever desired.



Sure, safe light wherever you go

### DESCRIPTIVE SPECIFICATIONS RUGGED CONSTRUCTION

K OHLER Electric Plants are built of the finest, tested materials, - accurately designed and machined. All moving parts are liberally oversize to insure dependable and trouble-free operation, free-



Kohler electricity can operate any type of household appliance

heat-treated to obtain the greatest strength and hardness. The gears are wide-faced The rocker arms, push rods and other smaller but important parts are made of specially hard-

ened steel to withstand long and severe usage.

### **BALANCE**

To insure quiet running, freedom from vibration and long life, the connecting rods and piston assembly are accurately balanced with the crankshaft.

#### **BEARINGS**

Vital parts such as the bearings are designed to withstand continuous operation at full load without need of adjustment. Crankshaft bearings are bronze-backed babbitt, 60% oversize. Kohler Plants frequently operate for several years without permitting the removal of even one .002 shim.

The extended crankshaft on which the armature is mounted is carried on a large self-adjusting ball-bearing to insure perfect align-

ment and smooth, easy running.

#### LUBRICATION

An oil pump in the oil base of the four cylinder plants forces a continuous stream of fresh, strained oil to all of the main bearings. In the two cylinder models an oil gear supplies oil to the bearings. The main bearings are lubricated by oil flowing through the hollow crankshaft.

### FUEL SUPPLY SYSTEM

Kohler Electric Plants are equipped with a vacuum tank which draws gasoline from a large, underground storage tank and supplies it to the engine. This system makes it unnecessary to fill and refill small supply tanks such as are used with most plants, and eliminates trouble, spillage of fuel and fire hazard.

#### COOLING

Kohler Plants are so cooled that they will operate continuously on full load. The four cylinder models are water-cooled; each cylinder is surrounded by a water jacket so designed that those portions of the cylinder and head which are subjected to the most intense heat, are uniformly cooled for most efficient operation.

In the two cylinder models the cooling is with air circulated by a suction fan. Cool air is drawn over fins on the cylinders and cylinder head and the heat is expelled through openings in the fly-wheel. No matter at what speed the plant is running or the load it is carrying,

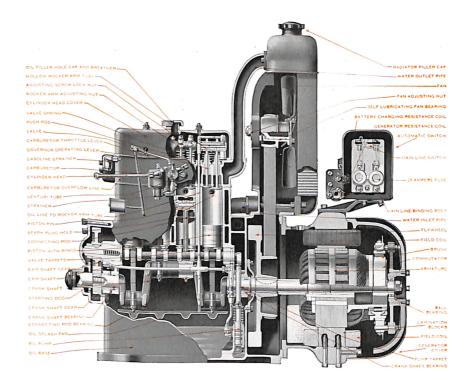
the cooling is effective.

#### **GENERATOR**

A rugged, four-pole generator forms a part of every Kohler Automatic. It is built complete in our own shops. A continuous flow of air is drawn through it to keep it at the most efficient operating temperature. The armature has an unusually large commutator. Wide carbon brushes make a close contact with it to insure full power delivery, and are designed to keep the commutator clean and polished.

### SELF-ADJUSTMENT to VARYING LOADS

No matter what part of the capacity of the plant is required, the voltage is automatically kept uniform. Lights are bright and steady and motors hum with vigorous power because the voltage is constant no matter how the electrical load varies.



# A LOOK INSIDE the STURDY KOHLER AUTOMATIC

THIS cut-open view shows the construction of the engine and generator of the MODEL "D", 1500 watt Kohler Automatic. Notice also the plunger pump in the oil base which forces fresh strained oil through copper tubes to the crankshaft, camshaft and rocker arm bearings. The arrows show the direction of the flow.

### A RECORD of PERFORMANCE

HUNDREDS of letters from Kohler owners testify to the year in, year out service which Kohler Automatic Electric Plants give. In every part of this country and in practically every civilized nation in the world they are supplying electricity for light, heat and motive power.

The United States Night Air Mail service has 59 Kohler Electric Plants installed on the route between New York City and Cleveland, Ohio, to supply electric current for the powerful lights on the beacon towers that guide the night flyers over the safe route. Here is a task where none but the most dependable plants could serve, for without light the lives of the pilots and their precious cargo of important mail and valuable securities would be in peril.

### USED WHERE DEPENDABILITY is the FIRST CONSIDERATION

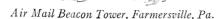
Aboard ships the Kohler Automatic is used in emergencies, to supply electricity for light, and current for

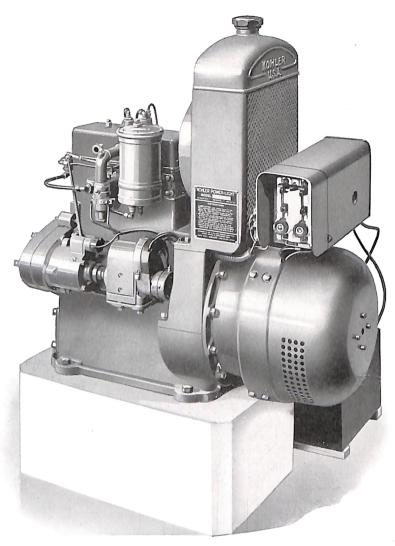
the radio when all other sources of electricity fail. In the operating rooms of hospitals where there *must* be light at all times, they stand by, ready to supply electric light the instant city service is interrupted.

### REASONABLE in PRICE

Backed by this record of performance, thousands of Kohler Plants are installed each year. And while

this record points the way for all who want the most in complete and satisfactory electric service from their own electric plant, the Kohler Automatic costs no more than any other plant of equal capacity, able to supply 110 volt "city" current, automatically by merely turning it on.





KOHLER AUTOMATIC ELECTRIC PLANT MODEL "D"
1500 watts capacity, 110 volts

EFFICIENT, sturdy, powerful, and wonderfully smooth-running, 4 cylinder valve-in-head engine. Large, oversize generator—direct connected. The famous Kohler-patented automatic switch which starts and stops the plant automatically is enclosed in the case mounted above the generator.

### Model "D"—110 Volts D. C.—1500 Watts Full Automatic Operation

(Except as noted below, these same specifications apply to Models "DA," "E," and "EA" Plants)

Engine—Four cylinder, four cycle, bore 2", stroke 3", speed 1000 R.P.M. Operates on gasoline. Very smooth and quiet in operation; practically vibrationless.

Fully Automatic—Plant starts automatically when first lamp or appliance is turned on. It stops automatically when all ap-

pliances and light bulbs are turned off.

Horsepower (Gas Engine)—3.

LUBRICATION—Pressure pump forcing strained oil to all main bearings and rocker arms; splash to connecting rod and piston pin bearings.

Cooling—Water-cooled; each cylinder entirely surrounded by water.

IGNITION—Dependable high tension magneto.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS—Drop forged steel, heat-treated for strength and hardness.

Governor—Completely enclosed, mechanical type. Maintains steady light at all loads. Increases or decreases amount of fuel used as the amount of current is increased or decreased—insures economy at all loads.

Starting Battery—24 volt, 12 cell (7 plates to cell) battery for starting only. 40 ampere hour capacity. Kept charged auto-

matically by small "trickling charge".

Fuel Supply—Vacuum tank on plant draws fuel for plant from gasoline storage tank.

Automatic Switch—Kohler-patented switch mounted on genera-

tor frame starts and stops engine automatically.

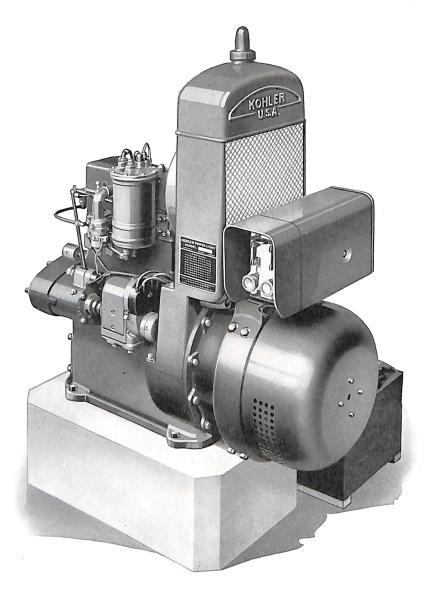
GENERATOR—Sturdy and efficient, four-pole, compound wound, 110 volt, direct current; large commutator, six inches in diameter; brushes 11/4" wide, 3/8" thick; capacity 1500 watts.

### Specifications of Other 1500 Watt 110 Volt Plants

Model "DA" ("Automatic Gas Plant")—Has gas valve attachment for operating on natural or artificial gas; otherwise specifications are same as for Model "D" plant. See pages 22 and 23.

Model "E" ("Manual Control Plant")—Without starting battery and automatic switch. Hand cranked. Has safety knife switch in place of automatic switch; otherwise specifications are same as for Model "D" plant. See pages 20 and 21.

Model "EA" ("Manual Control Gas Plant")—Without starting battery and automatic switch. Hand cranked. Has gas valve attachment, instead of underground gasoline storage tank, for operating on natural or artificial gas; otherwise specifications are same as for Model "D" plant. See pages 22 and 23.



### KOHLER AUTOMATIC ELECTRIC PLANT MODEL "K" 2000 watt capacity, 110 volts

 $F^{\it ULL}$  automatic; 4 cylinder valve-in-head engine; large direct-connected 2000 watt generator. This model is frequently selected for operating ships' radio and wherever the demands for current are heavy.

### Model "K"—110 Volt D. C. —2000 Watts Full Automatic Operation

(Except as noted below, these same specifications apply to Models "KA," "L," "LA" Plants)

ENGINE—Smooth operating, four cylinder, four cycle, bore 2", stroke 3", speed 1350 R.P.M. Operates on gasoline.

Fully Automatic—Starts automatically when any lamp or appliance in the circuit is turned on. Stops automatically when all electric devices are turned off.

Horsepower (Gas Engine)— $4\frac{1}{2}$ .

LUBRICATION—Pressure pump forcing strained oil to all main bearings and rocker arms; splash to connecting rod and piston pin bearings.

Cooling—Water-cooled, each cylinder entirely surrounded by water.

Ignition—Dependable high tension magneto.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS— Drop forged steel, heat-treated for strength and hardness.

Governor—Enclosed in dust-proof housing. Mechanical type. Insures constant voltage at all loads. Increases or decreases amount of fuel used to correspond with increase or decrease in current needed thus insuring fuel economy at all loads.

Starting Battery—12 cell, 7 plate, 24 volt, 40 ampere hour. Used for starting only. Kept charged automatically by small "trick-

ling charge" from the generator.

FUEL SUPPLY—Vacuum tank on plant draws fuel for plant from large gasoline storage tank.

AUTOMATIC SWITCH—KOHLER-patented switch mounted on generator

frame; starts and stops engine automatically.

GENERATOR—Sturdy and efficient; four-pole, compound wound, 110 volt, direct current; large six inch commutator; brushes 11/4" wide, 3/8" thick; capacity 2000 watts.

### Specifications of Other 2000 Watt 110 Volt Plants

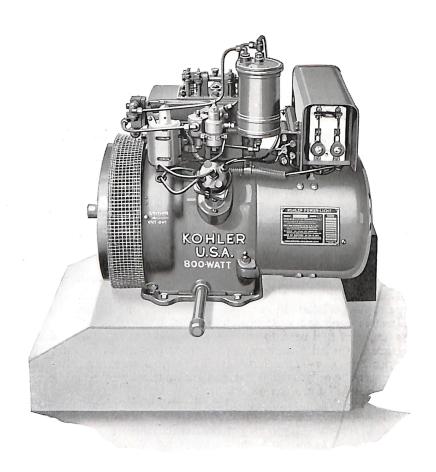
Model "KA" ("Automatic Gas Plant")—Has gas valve attachment for operating on natural or artificial gas. (See pages 22 and 23.) Other specifications same as for Model "K" plant.

Model "L" ("Manual Control Plant")—Without starting battery and automatic switch. Hand cranked. Has safety knife

switch in place of automatic starting switch; otherwise specifi-

cations are same as for Model "K" plant.

Model "LA" ("Manual Control Gas Plant")—Without starting battery and automatic switch. Hand cranked. Has gas valve attachment for operating on natural or artificial gas. (See pages 22 and 23.) Other specifications same as for Model "K".



### KOHLER AUTOMATIC ELECTRIC PLANT MODEL "S"

800 watts capacity, 110 volts

THIS model was produced to meet the demand for a smaller plant which would give the same automatic, batteryless service of 110 volt current supplied by larger models.

The Model "S" embodies the principal features of the large plant, but is air cooled and has two cylinders.

### Model "S"—110 Volt D. C.—800 Watts Full Automatic Operation

(Except as noted below, these same specifications apply to Models "SA," "T," and "TA" Plants)

ENGINE—Two cylinder, four cycle, smooth running and quiet in operation. Bore 2½", stroke 3", speed 950-1050 R.P.M. Operates on gasoline.

Fully Automatic—Plant starts automatically to generate current whenever any electric device in the circuit is turned on. Stops automatically when all lights and appliances are turned off.

Horsepower (Gas Engine)—13/4.

Lubrication—Hollow crankshaft; oil gear; positive flow of oil to all bearings.

Cooling—Air cooled; suction fan in flywheel draws cool air around cylinders and cylinder head.

IGNITION—Magneto built into flywheel.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS— Drop forged steel, heat-treated for strength and hardness. Crankshaft counter-balanced to insure smooth running.

Governor—Magnetic. Keeps voltage constant to insure steady lights. Regulates gasoline used as amount of current needed increases or decreases, thus insuring fuel economy at all loads.

STARTING BATTERY—24-volt battery of automobile type for starting only. Kept automatically charged.

FUEL SUPPLY—Vacuum tank on plant draws fuel from large supply tank.

Automatic Switch—Kohler-patented switch mounted on generator frame. Starts and stops engine automatically.

GENERATOR—Efficient, oversize, four-pole, compound wound, 110 volt, direct-current; commutator, six inches in diameter; carbon brushes 11/4" wide, 3/8" thick; capacity 800 watts.

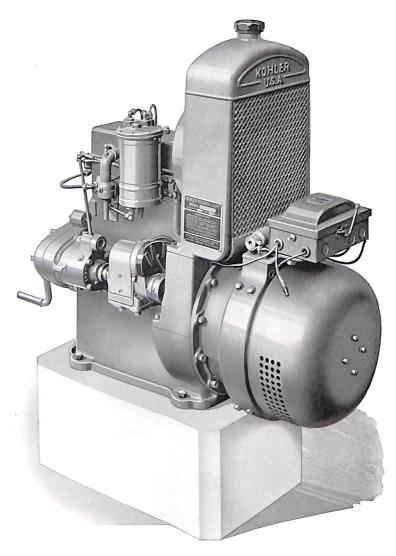
### Specifications of Other 800 Watt 110 Volt Plants

Model "SA" ("Automatic Gas Plant")—Has gas valve attachment for operating on natural or artificial gas. (See pages 22 and 23.) Other specifications same as for Model "S" plant.

Model "T" ("Manual Control Plant")—Without starting battery and automatic switch. Hand cranked. Has safety knife switch in place of automatic switch; otherwise specifications are same

as for Model "S" plant.

Model "TA" ("Manual Control Gas Plant")—Without starting battery and automatic switch. Hand cranked. Has gas valve attachment for operating on natural or artificial gas. (See pages 22 and 23.) Other specifications same as for Model "S" plant.



### KOHLER ELECTRIC PLANT MODEL "E" Capacity 1500 watts, 110 volts

THE Kohler Automatic Model "E" is without the automatic switch and starting battery and is started by hand cranking—otherwise it is the same in design and construction as the Model "D". All sizes of Kohler Plants can be supplied for hand starting.

### Model "E"—110 Volts D. C.—1500 Watts Manually Controlled

Engine—Balanced, four cylinder, four cycle; bore 2", stroke 3", speed 1000 R.P.M. Operates on gasoline.

METHOD OF OPERATION—Starts by hand-cranking; stops when button which grounds ignition is pressed.

Horsepower (Gas Engine)-3.

Lubrication—Pressure pump, forcing strained oil to all main bearings and rocker arm; splash to connecting rod and piston pin bearings.

Cooling—Water-cooled; each cylinder entirely surrounded by water.

IGNITION—Dependable high tension magneto.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS—Drop forged steel, heat-treated for strength and hardness.

Governor—Mechanical governor operating on carburetor. Maintains steady light at all loads and proportions fuel to load on the plant.

FUEL SUPPLY—Vacuum tank on plant draws fuel from gasoline stor-

age tank.

GENERATOR—Sturdy, efficient, four-pole, compound wound, 110 volt direct current; large commutator, six inches in diameter; brushes 11/4" wide, 3/8" thick; capacity 1500 watts.

This plant is frequently installed in schools, country clubs, churches, and on dredges, excavators, ditchers, pavers and other construction and excavating equipment. It is satisfactory for use where current is required steadily for long periods, where the automatic start and stop are of no special advantage, and usually where an attendant or care-taker is available to start and stop the plant.

This Kohler Electric plant is operating an electric pump for an artesian well of 125 feet in depth, also furnishing all the house current for my home, shop and garage together with all the electric appliances, including Washing Machine, Vacuum Cleaner, Waffle Iron, Radio Charger, and has been most delightfully satisfactory.

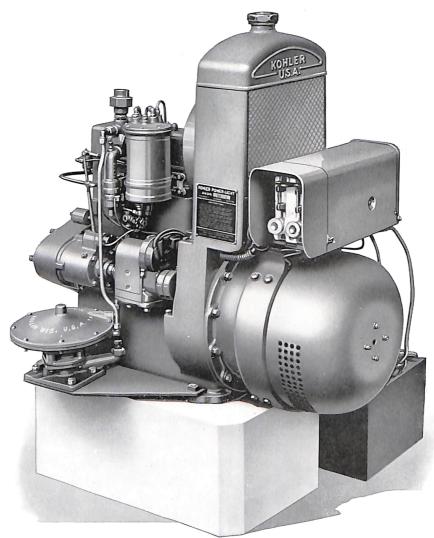
WM. W. Chambers, Philadelphia, Pa.

During the past five or six months we have purchased from the Kohler Company, Kohler, Wisconsin, approximately four or five units. This equipment is giving entire satisfaction, better, we believe, than any other equipment we have used for lighting purposes in the past.

McWilliams Dredging Company, Chicago

My Model S 110 Volt, 800 Watt Kohler unit, has more than lived up all that was said of it. This plant starts the compressor automatically, whenever the pressure is drawn down to 115 pounds, and will operate the motor and the lights at the same time, in spite of the fact that the Kohler is over three hundred feet from the station.

W. W. (BILL) SMITH, AUSTIN, TEXAS



KOHLER AUTOMATIC ELECTRIC PLANT MODEL "DA"
1500 watts capacity, 110 volts D. C.

THE KOHLER AUTOMATIC can be furnished with a "gas valve" attachment for operating on natural or artificial gas. This "gas valve" is so designed that the gasoline connections can also be made and the plant operated interchangeably on gasoline or gas. Changing from one fuel to the other takes just a second's time.

The "gas valve" is used in natural gas regions and in city buildings where the use of gasoline might be objected to. Kohler Plants in all

models and sizes can be furnished with this attachment.

#### Model "DA"—1500 Watts—110 Volts D. C. Automatic Gas Plant

(Except as noted below, these same specifications apply to Models "D," "E," and "EA")

Engine—Four cylinder, four cycle, bore 2", stroke 3", speed 1000 R.P.M. Operates on natural or artificial gas as well as on gasoline; starts automatically when first lamp or appliance is turned on.

Horsepower (Gas Engine)—3.

Lubrication—Pressure pump, forcing strained oil to all main bearings and rocker arms; splash to connecting rod and piston pin bearings.

Cooling—Water cooled; each cylinder entirely surrounded by water.

Ignition—Dependable high tension magneto.

Crankshaft, Camshaft, Rocker Arms and Connecting Rods—Drop forged steel, heat-treated for strength and hardness.

GOVERNOR—Mechanical governor operating on carburetor, maintains steady light at all loads and proportions fuel to load on plant.

Automatic Starting Switch—Kohler-patented switch; starts and stops engine automatically.

GENERATOR—Sturdy, four-pole, compound wound, 110 volt, direct

current; capacity 1500 watts.

Gas Valve—Consists of a carburetor, overflow or escape pipe, and diaphragm valve for regulating flow of gas. Mounted on base of plant on carburetor side; attachment fitted with gasoline connections so that quick change can be made to either fuel.

### Specifications of Other 1500 Watt, 110 Volt Plants

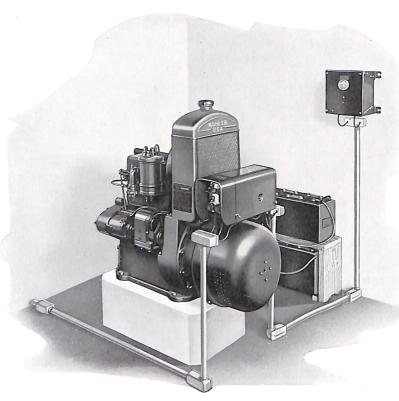
Model "D" (Automatic)—Without gas valve attachment, but with Kohler Automatic Starting Switch and starting battery. Operates on gasoline; otherwise specifications are same as Model "DA" plant.

"DA" plant.

Model "E" ("Manual Plant")—Without gas valve attachment, starting switch and starting battery. Hand cranked; operates on gasoline; otherwise specifications are same as "DA" plant.

Model "EA" ("Manual Control Gas Plant")—Has gas valve for operating on natural or artificial gas, but is without starting switch and starting battery; hand cranked; otherwise specifications are same as Model "DA" plant.

NOTE:—All Kohler Electric Plants are rated on their electrical output when operating on gasoline. When operated on natural or artificial gas, the output is dependent upon the quality of the fuel.



KOHLER AUTOMATIC ELECTRIC PLANT MODEL "DV" 1500 watts capacity, 110 volts with 32 volt starting and lighting battery

THIS model is a combination 110 volt and 32 volt system. Current from the generator is 110 volt D. C., from the battery, 32 volt D. C. It is built to serve all such installations as require 110 volt current for regular needs and where it is desirable to have, in addition, 32 volt electricity for a few lamps from the battery, without operating the plant. Aboard boats at night the battery supplies current for running lights, passage-ways and pilot house. In country banks and stores it supplies

electricity for a night light at the vault.

A three wire system is used. One wire carries out the 110 volt current from the generator, another the 32 volt current from the battery, while the third wire is a return conductor and completes both circuits.

Model "DV"—Combination of 1500 Watts of 110 Volt Current from the Generator and 32 Volt Current from a 72 Ampere-Hour Battery.

(Except as noted below, these same specifications apply to Models "DAV", "DPV", "KV", "KPV", "SV", "SAV", "DMV", and "DMAV" Plants.)

Engine, Generator, Automatic Switch—Identical with Model "D". Battery Charging Resistance Box—Switch regulates battery

charging rate. Ammeter shows rate of charge.

Battery—32 volts. 72 ampere-hour capacity at the 8 hour rate; 96 ampere-hour at the intermittent rate. 9 plates to each cell. Compact. Made up in two strong wooden trays. Used to crank the plant and to supply current for light on the 32 volt circuit.

#### Specifications of Other 110 Volt and 32 Volt Combination Plants

Model "DAV"—Engine, generator and automatic switch identical with Model "DA" (See pages 22 and 23). Otherwise specifications same as "DV" plant.

Model "DPV"—Engine, generator and automatic switch identical with Model "DP". (See pages 26 and 27.) Otherwise speci-

fications same as "DV" plant.

Model "DMV"—Engine, generator and automatic switch identical with Model "DM" plant. (See pages 28 and 29.) Otherwise specifications same as "DV" plant.

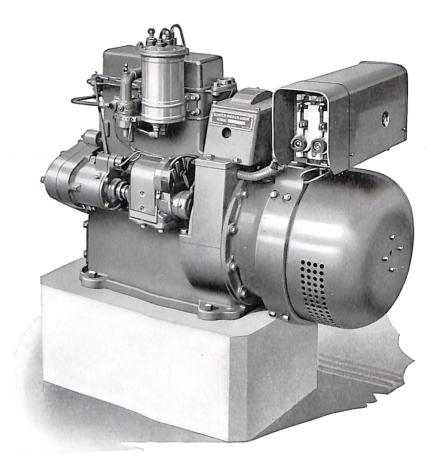
Model "DMAV"—Engine, generator and automatic switch identical with Model "DMA" plant. (See page 29.) Otherwise same as

"DV."

- Model "KV"—Engine, generator and automatic switch identical with Model "K". (See pages 16 and 17.) Otherwise specifications same as "DV" plant.
- Model "KAV"—Engine, generator and automatic switch identical with Model "KA". (See page 17.) Otherwise same as "DV."
- Model "KPV"—Engine, generator and automatic switch identical with Model "KP". (See page 27.) Otherwise same as "DV."
- Model "SV"—Engine, generator and automatic switch identical with Model "S" plant. (See pages 18 and 19.) Otherwise specifications same as "DV" plant.

Model "SAV"—Engine, generator and automatic switch identical with Model "SA" plant. (See page 19.) Otherwise specifications same as "DV" plant.

NOTE:—1500 watt and 2000 watt automatic plants operating in tandem can be connected so as to permit the use of the battery in a manner similar to the systems just described. In such installations a special relay switch is mounted on the multiple control board.



# KOHLER AUTOMATIC ELECTRIC PLANT MODEL "DP" "MARINE" Capacity 1500 watts

THE Kohler "Marine" plant is equipped with a pump for circulating fresh or salt water for cooling. Radiator and fan are eliminated.

All four-cylinder plants may be purchased with this circulating pump. Plants now in use may be changed to "Marine" plants by the addition of the new parts.

### Model "DP" (Marine Plant)—110 Volt D. C., 1500 Watts

(Except as noted below, these same specifications apply to Models "EP," "KP," and "LP")

Engine—Four cylinder, four cycle, bore 2", stroke 3". Operates on gasoline, starts automatically when first lamp or appliance is turned on.

Horsepower (Gas Engine)—3.

LUBRICATION—Pressure pump forcing strained oil to all main bearings and rocker arms. Splash to connecting rod and piston pin bearings.

Cooling—Belt driven gear pump circulates water through water jackets surrounding cylinders; suitable for salt and fresh water: no radiator or fan used.

IGNITION—Dependable high tension magneto.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS-Drop forged steel, heat-treated for strength and hardness.

GOVERNOR-Mechanical governor operating on carburetor. Maintains steady light at all loads and proportions fuel to load on the plant.

STARTING BATTERY—Small 24-volt battery of automobile type for

starting only; kept automatically charged.

Fuel Supply—Vacuum tank on plant connected to main supply tank draws fuel for plant.

AUTOMATIC STARTING SWITCH—Mounted on generator frame. Starts and stops engine automatically.

GENERATOR Sturdy, four-pole, compound wound, 110 volt direct current; capacity 1500 watts.

### Specifications of Other "Marine" Plants

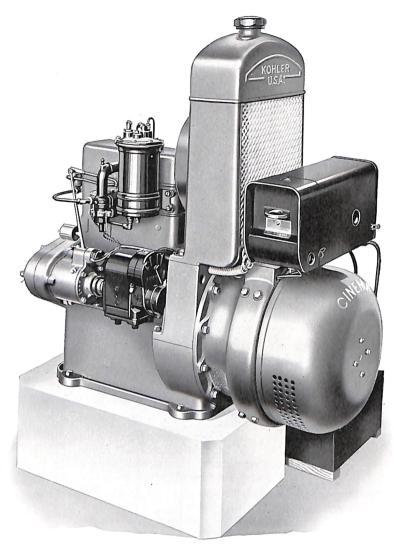
Model "EP" (Manual Control "Marine" Plant)—Without starting battery and automatic switch. Hand cranked. Has safety knife switch in place of automatic starting switch. Otherwise specifications are same as for Model "DP" plant.

Model "KP" (Automatic "Marine" Plant)—Generates 2000 watts; speed 1350 R.P.M.; has circulating pump instead of radiator.

Otherwise same as Model "K". (See pages 16 and 17.)

Model "LP" (Manual Control "Marine" Plant)—Generates 2000 watts; speed 1350 R.P.M.; without starting battery and automatic switch. Has circulating pump instead of radiator. Hand cranked. Has safety knife switch in place of automatic starting switch. Otherwise same as Model "K" plant. (See pages 16 and 17.)

This is the end of the fourth season since the plant was installed and it has never given any trouble and is a joy and comfort. I value it above anything on my place. HOWARD W. FOOTE "THE GABLES", LES CHENEAUX ISLANDS, MICH.



### KOHLER AUTOMATIC ELECTRIC PLANT MODEL "DM" "CINEMA" Capacity 1500 watts

THE "Cinema" plant was designed for use in moving picture theatres, either as an emergency plant at times when central station current fails, or as a power plant for theatres where central station current is not available, or where the management prefers its own power plant.

The "Cinema" plant is equipped with a special switch, with oversize radiator, and is capable of giving continuous daily service over a long period of time.

### Model "DM"—1500 Watts—110 Volts D. C. Cinema Plant—Fully Automatic

Engine—Four cylinder, four cycle, bore 2", stroke 3", speed 1000 R.P.M. Operates on gasoline, starts automatically when first lamp or appliance is turned on.

Horsepower (Gas Engine)—3.

Lubrication—Pressure pump forcing strained oil to all main bearings and rocker arm; splash to connecting rod and piston pin bearings.

Cooling—Water cooled. Extra large radiator for cooling plant running long periods of time in small room; each cylinder en-

tirely surrounded by water.

Ignition—Dependable, high tension magneto.

CRANKSHAFT, CAMSHAFT, ROCKER ARMS AND CONNECTING RODS— Drop forged steel, heat-treated for strength and hardness.

Governor—Mechanical governor operating on carburetor maintains steady light at all loads and proportions fuel to load on the plant. Starting Battery—24-volt battery of automobile type for starting

only; kept automatically charged.

FUEL SUPPLY—Vacuum tank on plant connected to main supply tank to draw fuel for plant.

Automatic Starting Switch—Kohler-patented switch starts and stops plant automatically; equipped with "safety knife switch".

GENERATOR—Sturdy four-pole, compound wound, 110 volt direct current; capacity 1500 watts.

### Model "DMA"—(Automatic Gas Plant)

Has gas valve attachment for operating on natural or artificial gas. Otherwise specifications are the same as Model "DM".

This plant is used in natural gas regions and in city buildings where the use of gasoline might be objected to. Kohler Plants in all Models and sizes can be furnished with this gas valve attachment.

I have had a good bit of experience with other portable electric light plants and I can truthfully say that I do not believe there is one on the market that can compare with the Kohler. I am using it for light and power both with fine results.

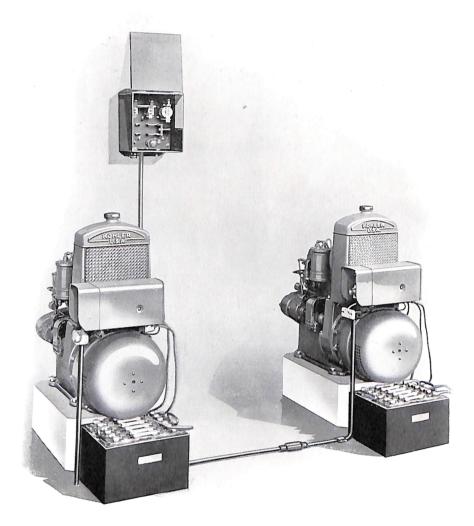
LA MONT BROS. SHOWS, C. R. LA MONT, SALEM, ILL.

We have nothing but the highest praise to offer. We certainly would not feel safe in operating a theatre without a plant of this nature.

RIDGE THEATRE, PARK RIDGE, ILLINOIS.

The lights outside our store have increased our cash sales and we are so well pleased with the Kohler, and it is so dependable, that we would not part with it for anything in the world.

R. L. RICHTER, B. R. RICHTER & Co., CAMAS VALLEY, OREGON



### KOHLER AUTOMATICS IN MULTIPLE

WHERE the demand for current is greater than one plant alone can supply, we furnish a switch so that two or more plants can be connected together to carry a common load.

This gives an unusual economy, since for all small loads one plant alone would operate, while for peak loads, the second, third and fourth

plants would operate.

The multiple switch can be furnished to operate Two, Three or four unit combinations. The switches are supplied at a moderate extra charge.

### WEIGHTS AND MEASUREMENTS OF KOHLER ELECTRIC PLANTS

#### DOMESTIC

| MODEL               | NET<br>WEIGHT<br>(UNCRATED) | GROSS<br>WEIGHT<br>(CRATED) | LENGTH  | WIDTH   | HEIGHT                   | SEE PAGES        |
|---------------------|-----------------------------|-----------------------------|---|---|--------------------------|------------------|
| D                   | 480 lbs.                    | 650 lbs.                    | 35 in.  | 161/4 in.   | 34¾ in.                  | 14 and 15        |
| DA                  | 500                         | 670                         | 35  | 213/2   | 361/4                    | 22 and 23        |
| $_{\mathrm{DM}}$    | 480                         | 650                         | 35  | $   \begin{array}{c}     16\frac{1}{4} \\     16\frac{1}{4} \\     16\frac{1}{4} \\     21\frac{3}{4}   \end{array} $ | 361/4                    | 28 and 29        |
| $^{\mathrm{DP}}$    | 465                         | 635                         | 35  | 161/4   | 26                       | 26 and 27        |
| E                   | 465                         | 635                         | 35  | 161/4   | 361/4                    | 20 and 21        |
| EA                  | 485                         | 655                         | 35  | $21\frac{3}{32}$  | 361/4                    | 15 and 23        |
| EP                  | 465                         | 635                         | 35  | 16 1/4  | 26                       | 27               |
| K                   | 480                         | 650                         | 35  | 161/4   | 38                       | 16 and 17        |
| KA                  | 500                         | 670                         | 35  | $21\frac{3}{32}$  | 38                       | 17               |
| KP                  | 465                         | 635                         | 35  | 16 ¼<br>16 ¼<br>21 ½<br>16 ¼<br>17 ¼<br>23 ¼<br>17 ¼<br>23 ¼  | 26                       | 27               |
| L .                 | 465                         | 635                         | 35  | 161/4   | 38                       | 17               |
| LA<br>LP<br>S<br>SA | 485                         | 655                         | 35  | $21\frac{3}{32}$  | 38                       | 17               |
| LP                  | 465                         | 635                         | 35  | 1614  | 26                       | 27               |
| 8,                  | 370                         | 495                         | 279/16  | 171/8   | 261/8                    | 18 and 19        |
| T SA                | 390<br>355                  | 515<br>480                  | 27 <sup>9</sup> / <sub>16</sub><br>27 <sup>9</sup> / <sub>16</sub><br>27 <sup>9</sup> / <sub>16</sub> | 23 14   | 26½<br>26½<br>26½<br>26½ | 19<br>19         |
| TA                  | 375                         | 500                         | 279/16  | 221/8   | 261/8                    | 19               |
| Starting            | 373                         | 300                         | 21716   | 2374  | 2078                     | 19               |
| Battery             | 90                          | 130                         | 137/8   | 115/8   | 10                       | Shown with all   |
| Dattery             | ,,,                         | 150                         | 15/8  | 11/8  | 10                       | automatic plants |
| 72 A. H. Battery \  | 245 lbs. (wet)              | 295 lbs. (wet)              | 27 in.  | 7½ in.  | 10 in.                   | 24 and 25        |
| (2 trays)           | 200 lbs. (dry)              | 250 lbs. (dry)              | (1 tray)  | (1 tray)  | (1 tray)                 | 24 and 25        |
| Battery )           | (,                          | , , ,                       | ,   |   |                          |                  |
| Charging }          | 13 lbs.                     | 40 lbs.                     | DEPTH   | 10½ in.   | 9¼ in.                   | 24 and 25        |
| Resistance Box )    |                             |                             | 7 in.   |   |                          |                  |
|                     |                             |                             | LENGTH  |   | 1                        |                  |
| Tank (55 gal.)      | 100                         |                             | 34 in.  | 22½ (Diam.)   |                          | Not illustrated  |
| Tank (100 gal.)     | 125                         |                             | 42 in.  | 28½ (Diam.)   |                          | Not illustrated  |
| Tank (200 gal.)     | 250                         |                             | 84 in.  | 28½ (Diam.)   |                          | Not illustrated  |
| Tank (45 gal.)      | 245 (Marine)                |                             | 40 in.  | 20 (Diam.)  |                          | Not illustrated  |

#### EXPORT

| Money   | NET WEIGHT<br>(UNCRATED)  |  | GROSS WEIGHT<br>(CRATED)  |   | MEASUREMENTS OF<br>EXPORT PACKAGE  |  | ann nu ana  |
|---|---|--|---|---|--|--|---|
| MODEL   | POUNDS  | KILOGRAMS  | POUNDS  | KILOGRAMS   | CUBIC<br>FEET  | CUBIC<br>METERS  | SEE PAGES   |
| D<br>DA<br>DP<br>E<br>EA<br>EP<br>KA<br>KP<br>L<br>LA<br>S<br>SA<br>T | 600<br>620<br>584<br>500<br>520<br>584<br>600<br>620<br>584<br>500<br>520<br>584<br>390<br>410<br>385 | 272 . 155<br>281 . 227<br>264 . 898<br>226 . 796<br>235 . 868<br>272 . 155<br>281 . 227<br>264 . 898<br>226 . 796<br>235 . 868<br>264 . 898<br>176 . 901<br>185 . 973<br>174 . 633 | 840<br>860<br>815<br>710<br>730<br>815<br>840<br>860<br>815<br>710<br>730<br>815<br>540<br>560<br>520 | 381.018<br>390.089<br>369.678<br>322.050<br>331.122<br>369.678<br>381.017<br>390.089<br>369.678<br>322.051<br>331.122<br>369.678<br>244.940<br>254.012<br>235.868 | 27<br>27<br>24<br>24<br>27<br>27<br>27<br>27<br>27<br>24<br>24<br>27<br>16<br>16 | 0.7646<br>0.7646<br>0.7646<br>0.6796<br>0.6796<br>0.7646<br>0.7646<br>0.7646<br>0.6796<br>0.6796<br>0.4531<br>0.4531 | 14 and 15<br>22 and 23<br>26 and 27<br>20 and 21<br>15 and 23<br>27<br>16 and 17<br>17<br>27<br>17<br>18 and 19 |
| TA<br>Starting  | 405   | 183.705  | 540   | 244.940   | 16   | 0.4531   | 19  |
| Battery  72 A. H. Battery (2 trays) Battery (Charging Resistance Box  | 90<br>200<br>(dry)<br>13  | 90.718<br>(dry)<br>5.8968  | 135<br>270<br>(dry)<br>40   | 61.235<br>122.469<br>(dry)<br>18.1440   | 7.3952<br>0.3928   | 0.1133<br>0.2093<br>0.1111   | Shown with all automatic plants 24 and 25 24 and 25   |

Net weights for Models D, DA, DP, KP, K and KA for export include plant, starting battery and tools. Net weights for E, EA, EP, L, LA, LP, T, TA include plant and tools only. Batteries for S and SA plants are packed in separate containers; net weights of these include tools and plant only.

[31]

### PROMINENT INDIVIDUALS AND CORPORATIONS WHO HAVE SELECTED THE KOHLER AUTOMATIC

(One to Sixty Plants)

U. S. GOVERNMENT: U. S. Night Air Mail service
60—1500 Watt Kohler Plants to light air mail beacon towers at night. U. S. BUREAU OF: AgricultureLighthouses War Education Mines James R. Mellon, Pittsburg, Pa.
Brother of Andrew Mellon Secretary of the U.S. Treasury G. W. WILLIAMS, PRESIDENT Nordyke-Marmon Co., Indianapolis BUFFALO BILL RANCH Cody, Wyoming SEATTLE FIRE DEPARTMENT Seattle, Wash. FOUNTAIN LAKE PARK Hot Springs, Arkansas CHARLES W. NASH, PRESIDENT Nash Motors Co., Kenosha, Wisc. YELLOWSTONE NATIONAL PARK Gardner, Montana MAJOR SAMUEL D. RIDDLE Philadelphia, Owner of Man-O-War GEORGE T. HAND, CHIEF ENGINEER Lehigh Valley R. R. Co. GEORGE BRANDEIS, J. L. BRANDEIS & SONS' STORES Omaha, Nebraska Alaska Steamship Co., Seattle, Wash. Seven Model "K" Plants C. D. SUMMY, VICE-PRES. American Railway Express Co. Summer Home, Hammond, La. WILLIAM RANDOLPH HEARST, Newspaper magnate, San Simeon, Calif. STANDARD OIL CO. OF NEW YORK 14 plants on oil barges Virginia Military Institute Summer School Lexington, Virginia CRATER LAKE NATIONAL PARK Crater Lake, Oregon SOUTHMOOR COUNTRY CLUB Palos Park, Ill. University of Michigan Hospital Ann Arbor, Michigan PIKE'S PEAK, COLORADO Four Kohler Automatics LUCKENBACH STEAMSHIP CO., NEW YORK Nine Model "K" Plants SHOSHONE INDIAN RESERVATION

R. E. Olds, Reo Motor Co. Lansing, Michigan A. C. Mack, Advertising Manager Literary Digest, New York City FORD & PAYNE, NAVAL ARCHITECTS New York City Roca, Nebraska Town Lighting RANDOLPH COUNTY SCHOOL Asheboro, N. C. STATE PARKS DEPARTMENT Olympia, Wash. WIRT MORTON, PRESIDENT Morton Salt Co., Chicago St. Lawrence Hospital Lansing, Mich., Emergency Service MAYBACH MOTOR CO., SUBSIDIARY OF Maybach, Zeppelin Co., New York City Union Pacific System, Omaha, Nebr. Used on McKeen Motor Cars BELTON CHALETS, HOTEL OWNED BY Great Northern Ry., Belton, Mont. McWilliams Dredging Co., Chicago Eight plants in Service OLIVER MINING CO., DULUTH, MINNESOTA OREGON CAVES RESORT Grant's Pass, Oregon PACIFIC TELEPHONE & TELEGRAPH CO. Portland, Oregon SENATOR T. COLEMAN DU PONT Wilmington, Delaware GLACIER NATIONAL PARK Belton, Montana COLONEL H. H. ROGERS, OWNER SPEED BOAT "Charming Polly," New York City; Six Model "D" Plants RUBEN & CHERRY SHOWS Montgomery, Alabama W. A. Fraser, Sovereign Commander Woodmen of the World, Omaha, Nebr. SINGER'S LAKE CRESCENT TAVERN Port Angeles, Wash. PANTAGES THEATRE Memphis, Tennessee CHARLES E. FELT, MANAGER
National Playgrounds Ass'n, Chicago Frank Bell, General Manager Great Northern Railway Co., St. Paul, Minn. WM. S. "BILL" HART, MOTION PICTURE ACTOR Westport, Conn. SPARK'S CIRCUS Macon, Georgia ARTHUR T. VANCE, EDITOR Pictorial Review, New York City Webb Jay, Chicago Three Plants on Boats PATRICK-DULUTH CLUB Lake Nebagamon, Wis. PACIFIC AIR TRANSPORT CO. Portland, Ore., used for night flying

Fort Washakie, Wyoming

American Can Co., Chicago

American Steel Foundries, Chicago

Konnarock, Virginia

Tacoma, Wash.

Konnarock Training School

St. Paul & Tacoma Lumber Co.

K. S. Breckenridge, Vice-Pres.

George E. Scott, Vice-Pres.



### KOHLER OF KOHLER PLUMBING FIXTURES

WHEREVER cleanliness is a rule of life, you are likely to find Kohler Plumbing Fixtures.

Graceful in design and clad in a durable, immaculately white enamel, they combine

beauty with enduring service.

There's a pride-mark on each fixture—the name Kohler inconspicuously fused in faint blue letters deep in the enamel—the symbol of unexcelled quality and unmatched beauty, at no higher cost.

You can easily have a complete and modern kitchen, laundry and bathroom, once you have a Kohler Plant. For the Kohler Automatic will supply power for running water to what-

ever fixtures you desire.



Factory and General Offices. Kohler Co., Kohler, Wis., U.S. A.

### KOHLER OF KOHLER

TO many people Kohler of Kohler designates plumbing fixtures of snowy whiteness, beautiful design, and enduring worth.

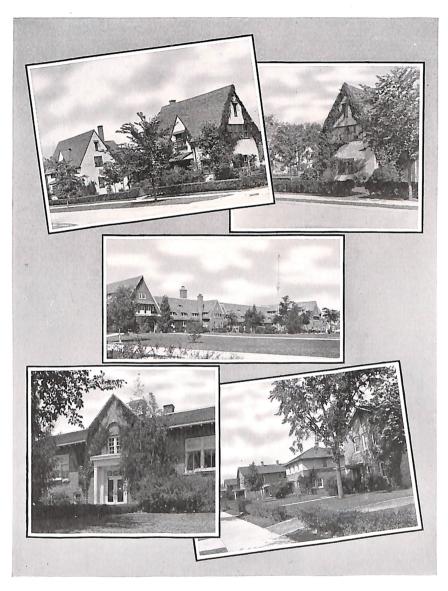
To others it identifies an automatic electric plant skillfully and sturdily constructed to insure many years of complete, economical

and dependable service.

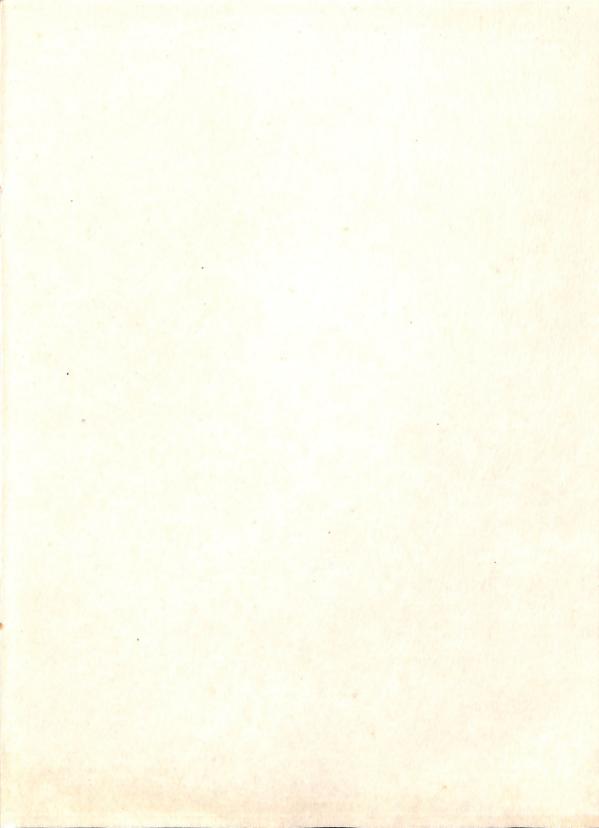
But to the one who knows it best Kohler of Kohler calls to mind a beautiful Village in Wisconsin. Here many of the artisans who build Kohler products reside in comfortable homes, festooned with vines, and surrounded by spacious lawns.

In this environment of wholesome and worth-while living Kohler of Kohler Plumbing Fixtures and Automatic Electric Plants are produced to bring more of comfort, health,

and happiness to homes everywhere.



Glimpses of Kohler Village where many of the members of the Kohler Organization live





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